

U.S. Patent Application Serial No. 10/059,136  
Amendment dated **March 12, 2004**  
Reply to OA of **December 12, 2003**

**REMARKS**

Claims 12 and 14-22 are pending in this application.

**Priority**

The Applicants thank the Examiner for noting that the specification must be amended to reference the prior application. The applicants have already made such an amendment as indicated on the utility application transmittal form p.2, filed January 31, 2002.

**Claims 12 and 14-22 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.** (Office action point 4)

Applicants have amended claim 12, in accordance with the Examiner's suggestions. The Applicants respectfully submit that no new matter has been added. Thus, reconsideration and withdrawal of the rejections of these claims are respectfully requested.

**Claims 12 and 14-22 are rejected under 35 U.S.C. §103(a) as being unpatentable over Staral et al. (U.S. Patent No. 5,897,727) in view of Crivello (U.S. Patent No. 4,175,973).** (Office action point 6).

The rejection is traversed because the combination of the Staral '727 reference, alone or in combination with Crivello'973, fails to make a *prima facie* rejection of obvious. Specifically, the

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combination is different from the claimed invention for several reasons including the following:

First, Staral '727 includes an adhesive layer comprising a crosslinkable adhesive layer, which may be a pressure-sensitive or low temperature softening thermal adhesive layer, which is used in the transfer process (col. 1, lines 12-16). Because of the thermal adhesive layer, Staral '727 discloses a step (2) of applying sufficient *thermal* energy to the mixture to effect essentially *complete polymerization* of the thermally free-radically polymerizable monomer (col. 9, lines 22-24).

In contrast, claim 12 and claims dependant thereon do not claim a thermal adhesive layer and the necessity of applying thermal energy to complete polymerization. The claimed invention is completed by UV irradiation.

Second, the assertion at the top of p.4 of the Office Action that the list of (meth) acrylates monomer disclosed from col.12, line 7 to col.13, line 7 of Staral '727 results in high molecular weight polymers that have a molecular weight of several tens of thousands to 5 million is not supported. In fact, there is no disclosure or suggestion of the molecular wight of high molecular weight compounds at all. The list mentioned above could also result in low molecular weight compounds as disclosed in U.S. Pat. 5,252,694 incorporated by reference in Staral '727, col. 12, line 10 (see the disclosed bis-methacrylates of polyethylene glycols of molecular weight 200-500).

The Office Action points to a disclosure of monomers, but there is no disclosure the range of the resulting polymers.

Third, the Office Action notes on p.4; text lines 10-12 that Staral '727 is silent toward the curing irradiation being ultraviolet light having an intensity greater than 1mW/cm<sup>2</sup>. It is

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noteworthy that Karim '289 is mentioned here but is not cited in the rejection. Therefore the reliance on Karim '289 is improper. The Office Action asserts that the intensity would be within one skilled in the art. However, there is no suggestion in Staral '727 to suggest the proper range. Nor is there any teaching of the following range which is claimed in claim 12 and disclosed on p.31-32 of the specification:

As to a wavelength of irradiation for photocuring, when the photo-sensitive onium salt compound is used as the cationic photoinitiator, it is preferable to utilize the irradiation in a wavelength region equal to and greater than 300 nm and having an intensity from 1 mW/cm<sup>2</sup> to 100 mW/cm<sup>2</sup>, preferably from 5 mW/cm<sup>2</sup> to 100 mW/cm<sup>2</sup>. The radiation having a wavelength below 300 nm is able to provide a sufficient activation energy for activating the photo-sensitive onium salt compound, however, its transmittance is insufficient such that only the tacky surface of the sheet-form curable pressure-sensitive adhesive may be crosslinked. This possibly prohibits an intimate contact of the sheet-form curable pressure-sensitive adhesive surface with the adhrends. In some instances, an interior of the sheet-form curable pressure-sensitive adhesive remains uncured.

If the radiation in a wavelength region equal to and greater than 300 nm has an intensity of below 1 mW/cm<sup>2</sup>, its energy is insufficient to activate the photo-sensitive onium salt compound so that only a small proportion thereof is photoactivated. This results in a reduced curing speed. From the foregoing, a useful radiation preferably has a wavelength of at least 300 nm, more preferably at least 300 nm but below 800 nm, still more preferably at least 300 nm but below 400 nm.

Thus, the Staral '727 reference, alone or in combination with Crivello'973 fails to make the above teaching. Without the proper teaching, the conclusion of obviousness logically fails.

Further, the Applicants also disagree with the assertion that Crivello'973 teaches the

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irradiation characteristics at col.5, line 57 to col.6, line 1. The disclosure is not related to any alleged conventional or general teaching.

Finally, the Office Action states at the top of p.5 of the Office Action that Staral '727 is silent toward the weight composition of the pressure sensitive adhesive as claimed in claim 15. This is correct, Staral '727 lacks the disclosure or suggestion of the weight composition.

Based on the complete lack of disclosure of the claimed elements in Staral '727, much less a suggestion of these elements, in combination with Crivello '973, the Applicants assert that the a *prima facie* showing of obviousness regarding independent claim 12 and all claims dependant thereon has not been established. The rejection should be withdrawn.

**Claims 12 and 14-22 are rejected under 35 U.S.C. §103(a) as being unpatentable over Karim et al. (U.S. Patent No. 5,721,289) in view of Crivello (U.S. Patent No. 4,175,973).**  
(Office action point 7)

The rejection over Karim '289 is very similar to the rejection of Staral '727 and the Office Action indicates the column and line numbers for Karim '289 which are different from Staral '727. As pointed out in the Office Action at the bottom of p.7, Karim '289 is also silent toward the curing irradiation being ultra violet light having an intensity greater than 1mW/cm<sup>2</sup>. In fact, Karim is listed as the second inventor on Staral '727, and the text of Karim '289 is similar to Staral '727.

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First, all points explained above for Staral '727 are applicable to distinguishing Karim '289 and will not be repeated here.

Second, while Staral '727 and Karim '289 have slightly different disclosures, they are the generally same, and in combination with Crivello '973, they fail to teach or suggest the claimed invention, as explained in reference to the first rejection. In fact, the combination of the references fails to make a *prime facie* rejection of obviousness.

Based on the complete lack of disclosure of the claimed elements in Karim '289, much less a suggestion of these elements, in combination with Crivello '973, the Applicants assert that the a *prima facie* showing of obviousness regarding independent claim 12 and all claims dependant thereon has not been established. The rejection should be withdrawn.

In view of the aforementioned amendments and accompanying remarks, claims, as amended, are in condition for allowance, which action, at an early date, is requested.

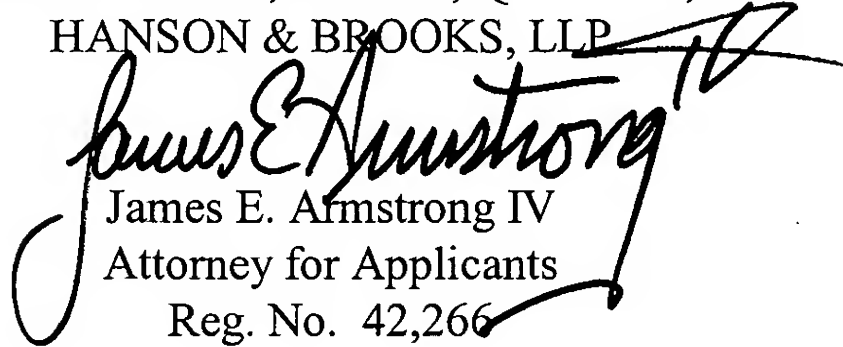
If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact Applicants undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

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In the event that this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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